

Docket No.: SCHÜRMANN
Serial No.: 10/766,286

REMARKS

The last Office Action of December 17, 2004 has been carefully considered. Reconsideration of the instant application in view of the foregoing amendments and the following remarks is respectfully requested.

Claims 1-7 are pending in the application. No claims have been amended. Claim 2 has been canceled. No claims have been added. A total of 6 claims is now on file. No claim surcharge is due. No amendment to the specification has been made.

Applicant hereby certifies that neither the international application nor the designation of the United States was withdrawn or considered to be withdrawn prior to the filing date of the U.S. national (35 U.S.C. 111(a)) application.

It is noted that claim 2 has been objected to for failing to further limit the subject matter of the previous claim.

Claims 1-7 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Pat. No 5,641,227 to Geyer in view of U.S. Pat. No. 4,128,342 to Renk and JP Abstract Publications 2000218665 and 2000218664.

OBJECTION TO THE CLAIM

The Examiner has objected to claim for failing to further limit the subject matter of the claim from claim 2 depends. In response to the rejection, applicant has cancelled the claim. The objection has thereby become moot.

Docket No.: SCHÜRMANN
Serial No.: 10/766,286

Withdrawal of the objection of claim 2 in view of the cancellation is thus respectfully requested.

REJECTION OF CLAIMS 1-7 UNDER 35 U.S.C. §103(a) AS BEING UNPATENTABLE OVER GEYER IN VIEW OF KAZUTOSHI AND RENK.

General Comment:

The Examiner has cited two Abstracts under Kazutoshi. Thus, the rejection seems to be directed to both Kazutoshi Abstracts. In order for applicant to respond to the rejection, only those portions which are identical to both Abstracts have been regarded in the discussion that follows.

The Examiner has now rejected the original claims as unpatentable over Geyer in view of Kazutoshi and Renk. However, applicant believes that claims 1, and 3-7, as now on file are clearly distinguishable over the cited references for reason which will be set forth hereinafter.

Applicant respectfully disagrees with the Examiner's rejection of claim 1 for the following reason:

The Examiner sets forth that Geyer teaches certain features of the claimed invention, admitting that Geyer fails to teach that feature of the invention directed to a mixing and metering device embracing the plunger and an inlet and mixing devices. Therefore, the Examiner calls upon three further references to supply the missing features. Specifically, the Examiner first cites the Kazutoshi references as teaching a structure for preventing backflow of molten material at the time of injection respectively, at the time of residence of the material, by the

Docket No.: SCHÜRMANN
Serial No.: 10/766,286

addition of a plunger and a torpedo embracing the plunger located at the end of a screw and also an accumulation chamber. The torpedo as alleged by the Examiner provides an intermediate component for extending the accumulation chamber and the plunger having a tapered shaft for expulsion of the plastic melt from the accumulation chamber. How the backflow prevention device operates by this configuration is not explained by the Examiner nor the Abstracts. The Kazutoshi Abstracts do not provide a specific structure that is designed to prevent backflow nor any explanation of operation. It is thus left to conjecture how backflow might be prevented in Kazutoshi. Nonetheless, the Examiner considers obvious to one of ordinary skill in the art to modify Geyer with a plunger and accumulation chamber as taught by Kazutoshi to provide the feature of backflow prevention in injection molding.

Geyer, on the other hand, shows a housing with an inner diameter and a screw carrying out axial and rotation movements, a spacer element with a tapered shaft and circular ring cross section. From this structural arrangement, it is not seen how the modification proposed by the Examiner could be accomplished. Where would or could such accumulation chamber be located upstream or downstream? The Examiner has failed to show any motivation why the skilled artisan would modify Geyer in the first place and how this could be structurally accomplished with the teachings of the Kazutoshi Abstracts.

The Examiner also cites Renk as teaching a mixing and metering device that embraces the screw in a circular ring shaped manner for mixing and metering, and an inlet for additives, with the mixing elements allegedly having surface configurations that include toothed surfaces. It would be obvious, so the

Docket No.: SCHÜRMANN
Serial No.: 10/766,286

Examiner, to modify Geyer as modified by Kazutoshi with a metering and mixing device and inlet taught by Renk because it would allow for improved mixing before the material leaves the injection molding machine.

Applicant disagrees with the Examiner's combining the references in the afore-stated way. It is applicant's contention that the Examiner relied upon hindsight to arrive at the determination of obviousness. It is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious. In re Gorman, 933 F.2d 982. In the case at hand, as already stated, Geyer teaches a screw that is capable of movement in axial and rotating movement. However, there is no teaching or suggestion in Geyer supporting the combination as proposed by the Examiner, namely to combine the mixing elements of Renk with the Geyer/Kazutoshi structure. Again how these structures would be combined is not seen nor explained by the Examiner nor is there any compelling reason why such mixing elements should be needed in Geyer. The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. In re Gordon, 733 F.2d at 902. Clearly, there is no desirability shown why Geyer should be so modified. But even if these features would be combined, it would still not yield an operable injection molding machine of the type as claimed here.

With respect to Renk, this reference does not teach an axial movement of the screw. While Renk may teach a mixing and metering device, the mixing and metering device in the claimed invention differs from that of the Renk reference.

Docket No.: SCHÜRMANN
Serial No.: 10/766,286

As claimed, the mixing and metering device is in driving relationship with the injection device and includes a rotatable tube in fixed rotative connection with the plunger and the inner mixing element rotates upon rotation of the screw via the plunger and the shaft. Thus, there is a relative movement between the screw respectively the injection plunger arranged anteriorly and the mixing and dosing elements. This arrangement is entirely different from the arrangement in Renk.

Furthermore, Geyer as well as the Kazutoshi references and Renk are completely devoid of structures as claimed such as the spacer element having a central throughbore beginning in the area of the backflow prevention assembly and ending in a ring-shaped constriction of the spacer element at the plunger-side end of the spacer element for establishing a fluidic communication between the throughbore and an annulus-forming flow channel.

The Examiner's attempt to accumulate features amounts to an unjustifiable picking and choosing of features of a particular reference and a theoretically combination without any regard to the structural constraints of whether such combination would work or be desirable.

In summary, the Geyer cannot be modified as claimed by the Examiner and the elements picked from Kazutoshi and Renk are not combinable with the structure taught in Geyer.

For the reasons set forth above, it is applicant's contention that neither Geyer nor Kazutoshi and Renk nor a combination thereof teaches or suggests the features of the present invention, as recited in claim 1.

Docket No.: SCHÜRMANN
Serial No.: 10/766,286

Claims 3-7 which depend on claim 1 and therefore contain all the limitations thereof, patentably distinguish over the applied prior art in the same manner as claim 1.

Withdrawal of the rejection of claims 1, 3-7 under 35 U.S.C. §103(a) and allowance thereof are thus respectfully requested.

CITED REFERENCES

Applicant has also carefully scrutinized the further cited prior art and finds it without any relevance to the newly submitted claims. It is thus felt that no specific discussion thereof is necessary.

CONCLUSION

Applicant believes that when the Examiner reconsiders the claims in the light of the above comments, he will agree that the invention is in no way properly met or anticipated or even suggested by any of the references however they are considered.

None of the references discloses an injection unit with a device for mixing and dosing plastic melt and additives as claimed.

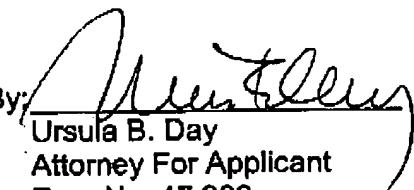
In view of the above presented remarks and amendments, it is respectfully submitted that all claims on file should be considered patentably differentiated over the art and should be allowed.

Docket No.: SCHÜRMANN
Serial No.: 10/766,286

Reconsideration and allowance of the present application are respectfully requested.

Should the Examiner consider necessary or desirable any formal changes anywhere in the specification, claims and/or drawing, then it is respectfully requested that such changes be made by Examiner's Amendment, if the Examiner feels this would facilitate passage of the case to issuance. If the Examiner feels that it might be helpful in advancing this case by calling the undersigned, applicant would greatly appreciate such a telephone interview.

Respectfully submitted,

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